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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,839	03/08/2004	Koichi Nitta	81788.0267	1265
26021	7590	09/30/2005	EXAMINER	
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			LOUIE, WAI SING	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/795,839	NITTA ET AL.	
	Examiner	Art Unit	
	Wai-Sing Louie	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/21/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-23, 25-27, 30-31, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (US 6,147,367) in view of Kitahata et al. (US 6,037,400).

With regard to claim 21, 27, and 35, Yang et al. disclose a light-emitting device (col. 3, line 12 to col. 7, line 64 and fig. 7) comprising:

- A first lead 703 (fig. 7);
- A second lead 701 (fig. 7);
- A first semiconductor light-emitting element 702 mounted on the first lead 703 (fig. 7);
- A semiconductor element 707 mounted on the first lead 703 (fig. 7);
- A first wire 709 connecting the first light-emitting element 702 and second lead 701 (fig. 7);
- A second wire 708 connecting the semiconductor element 707 and the second lead 701 (fig. 7);
- Yang et al. disclose epoxy housing to enclose the semiconductor light-emitting element, but do not disclose the silicon resins to enclose the light-emitting

element and the resin have hardness not lower than 50 in JISA value. However, Kitahata et al. disclose the epoxy and silicon resin are the same kind of organic macromolecular materials, which can be used singly or as a mixture (Kitahata col. 5, line 62 to col. 6, line 8) and these materials have a hardness of 50 JISA (col. 4, lines 64-67). Kitahata et al. teach these materials have the strength, heat resistance, and moldability characteristic (Kitahata col. 5, lines 55-68). Therefore, it would have been obvious to one of ordinary skill in the art to modify Yang's device with the teaching of Kitahata et al. to provide the silicon resin having a hardness not lower than 50 in JISA value in order to have the strength, heat resistance, and moldability characteristic as an encapsulant to enclose the light-emitting element.

With regard to claims 22 and 30, Yang et al. do not disclose a third wire connecting the first light-emitting element 702 and the first lead 703. However, if the first lead 703 is slit to mount the light-emitting element and the semiconductor element a third wire is required to complete the circuit.

With regard to claims 23 and 31, Yang et al. disclose the semiconductor element 707 is a second light-emitting element (fig. 7).

With regard to claims 25 and 33, Yang et al. modified by Kitahata et al. do not disclose the pre-curing viscosity in the range 100 to 10000 cp. However, when the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be obvious. Where the claimed and the prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially

identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

With regard to claims 26 and 34, Yang et al. modified by Courtney et al. would disclose the silicone resin has convex surface configuration (fig. 5).

Claims 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (US 6,147,367) modified by Kitahata et al. (US 6,037,400) as applied to claim 21 above, and further in view of Lebby et al. (US 5,748,161).

With regard to claims 24 and 32, Yang et al. do not disclose the first and second light-emitting elements 702 and 707 emit different peak wavelengths. However, Lebby et al. disclose an integrated electro-optical display having two LED's 28 and 30 (fig. 3) and they emit different wavelengths, where the first wavelength is different than the second wavelength (col. 2, lines 48-55). Lebby et al. teach the different LED's in the display creates a multi-color images (col. 2, lines 56-60). Yang et al. and Lebby et al. have substantially the same environment of two LED's in a same package. Therefore, it would have been obvious at the time the invention was made to modify Yang's device with the teaching of Kitahata and Lebby et al. to have two LED's that emit different wavelengths in order to form a multi-color images.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (US 6,147,367) modified by Kitahata et al. (US 6,037,400) as applied to claim 21 above, and further in view of Sun et al. (US 6,867,542).

With regard to claim 28, Yang et al. modified by Kitahata et al. do not disclose a fluorescent element in the silicone resin, which absorbs light emitted from the first light-emitting element and releases light of a different peak wavelength. However, Sun et al. disclose forming a layer of phosphor 38 on top of the LED 20 (Sun col. 4, lines 1-4). Sun et al. teach the phosphor acts down convert the light emitted from the LED (Sun col. 4, lines 1-4). Yang et al. and Sun et al. have substantially the same environment of LED encapsulated in the resin. Therefore, it would have been obvious for the one with ordinary skill in the art to modify Yang's device with the teaching of Kitahata and Sun et al. to provide the phosphor (fluorescent) in order to convert the wavelength of light emitted by the light-emitting element.

Claims 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (US 6,147,367) modified by Kitahata et al. (US 6,037,400) as applied to claim 21 above, and further in view of Sakai et al. (US 6,501,084).

With regard to claims 29 and 36, Yang et al. do not disclose the semiconductor element is a Zener diode. However, Sakai et al. disclose a Zener diode connected amount the LEDs (Sakai col. 3, line 60 to col. 4, line 4 and fig. 3). Sakai et al. teach the Zener diode prevents damage caused by static electricity (Sakai col. 4, lines 1-4). Therefore, it would have been obvious at the time the invention was made to modify Yang's device with the teaching of Sakai et al. to provide a Zener diode connected with the light-emitting element to prevent damage caused by static electricity.

Response to Arguments

Applicant's arguments filed 7/8/05 have been fully considered but they are not persuasive.

- Applicant states the criticality of the silicon resin hardness within 50 to 90 in JISA value. A new reference is cited to response to the amendment. Please see the rejection above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2814

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wsl

September 23, 2005.



LONG PHAM
PRIMARY EXAMINER